REMARKS

This is a full and timely response to the non-final Office Action of September 15, 2008. Reexamination, reconsideration, and allowance of the application and all presently pending claims are respectfully requested.

Upon entry of this Third Response, claims 1-8 and 10-19 are pending in this application. Claims 1, 2, 6, 11, 12, 16, and 18 are directly amended herein, and claim 19 is newly added. It is believed that the foregoing amendments add no new matter to the present application.

Response to Claim Objections

Claim 18 is objected to because of an alleged informality. Claim 18 has been amended herein thereby mooting the objection to claim 18. Thus, Applicants respectfully request that such objection be withdrawn.

Response to §101 Rejections

Claim 1-8, 10, 17, and 18 presently stand rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. Applicants respectively traverse the allegation that the foregoing claims are directed to non-statutory subject matter. In addition, claims 1 and 6 have been amended herein to recite "memory," which is clearly a physical article or object. Thus, Applicants submit that the 35 U.S.C. §101 rejections are moot and respectfully request that these rejections be withdrawn.

<h1 style="text-align:center">Response to §103 Rejections</h1>

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, *e.g., In Re Dow Chemical Co.,* 837 F.2d 469, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller,* 642 F.2d 413, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981). In addition, "(t)he PTO has the burden under section 103 to establish a *prima facie* case of obviousness." *In re Fine,* 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

Claim 1

Claim 1 presently stands rejected under 35 U.S.C. §103 as allegedly being unpatentable over *Gale* (U.S. Patent No. 6,868,509) in view of *Heeren* (U.S. Patent No. 6,311,288). Claim 1, as amended, reads as follows:

> 1. A network router, comprising:
> memory;
> a layer 1 portion having a first communication interface and a second communication interface;
> a layer 2 portion;
> a layer 3 portion having a layer 3 protocol stack, said layer 3 protocol stack having a routing table stored in said memory and specifying, for a particular destination, a data path from said layer 3 portion to said layer 2 portion, said layer 3 protocol stack configured to provide a plurality of data packets destined for the particular destination and to route through said data path each of said data packets based on said routing table, **said layer 3 protocol stack further configured to detect an error condition**; and
> **switching logic configured to automatically initiate a layer 2 switch in response to a detection of said error condition by said layer 3 protocol stack such that said layer 2 portion interfaces a plurality of said data packets with said second communication interface in lieu of said first communication interface, wherein said layer 2 switch is transparent to said layer 3 portion**, wherein said layer 2 portion is configured to interface at least one of said data packets with said first communication interface prior to said layer 2 switch, wherein said first communication interface is configured to transmit said at least one data packet to a second router via a first protocol over a first data path through a first network, and wherein said second communication interface is configured to transmit said plurality of said data packets to said second router via a second protocol over a second data path through a second network. (Emphasis added).

Applicants respectfully assert that the alleged combination of *Gale* and *Heeren* fails to suggest at least the features of claim 1 highlighted hereinabove. Thus, the 35 U.S.C. §103 rejection of claim 1 should be withdrawn.

In this regard, it is candidly admitted in the Office Action that *Gale* fails to teach a layer 2 switch that is transparent to a layer 3 portion of a network router. However, it is alleged in the Office Action that the features missing from *Gale* are suggested by *Heeren*.

Heeren appears to disclose a frame relay access unit (FRAU) 12 that implements layers 1 and 2 of the Open Systems Interconnect (OSI) seven-layer model. The FRAU 12 apparently initiates a switch to a backup path in response to an error condition. However, FRAU fails to suggest that the switch is to be initiated in response to an error condition that is detected by a layer 3 protocol stack. Thus, even if the select teachings of *Heeren* are combined with the select teachings of *Gale*, as alleged in the Office Action, the alleged combination nevertheless fails to suggest "switching logic configured to automatically initiate *a layer 2 switch in response to a detection of said error condition by said layer 3 protocol stack* such that said layer 2 portion interfaces a plurality of said data packets with said second communication interface in lieu of said first communication interface, *wherein said layer 2 switch is transparent to said layer 3 portion*," as recited by claim 1. (Emphasis added).

For at least the above reasons, Applicants respectfully assert that the alleged combination of *Gale* and *Heeren* fails to suggest each feature of claim 1. Accordingly, the 35 U.S.C. §103 rejection of claim 1 should be withdrawn.

Claims 2-5, 17, and 18

Claims 2, 4, 5, 17, and 18 presently stand rejected in the Office Action under 35 U.S.C.

§103 as allegedly being unpatentable over *Gale* in view of *Heeren*. In addition, claim 3 presently

stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over

Gale in view of *Heeren* further in view of *Singh* (U.S. Patent Publication No. 2003/0088698).

Applicants submit that the pending dependent claims 2-5, 17, and 18 contain all features of their

respective independent claim 1. Since claim 1 should be allowed, as argued hereinabove,

pending dependent claims 2-5, 17, and 18 should be allowed as a matter of law for at least this

reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 6

Claim 6 presently stands rejected under 35 U.S.C. §103 as allegedly being unpatentable

over *Gale* in view of *Heeren*. Claim 6 reads as follows:

> 6. A network router, comprising:
> memory;
> a layer 3 protocol stack configured to provide a plurality of data packets to
> be transmitted by said network router to a second router, the layer 3 protocol stack
> having a routing table stored in said memory and specifying a data path for routing
> said plurality of data packets to said second router, the layer 3 protocol stack
> configured to insert, into each of said plurality of data packets, route information
> indicative of said data path based on said routing table, the layer 3 protocol stack
> further configured to detect an error condition;
> a first layer 2 protocol stack;
> a second layer 2 protocol stack;
> a plurality of layer 3 network interfaces configured to receive data packets
> from said layer 3 protocol stack, wherein said layer 3 protocol stack is configured
> to provide each of said plurality of data packets to one of said layer 3 network
> interfaces; and
> layer 2 switching logic configured to receive each of said plurality of data
> packets from said one layer 3 network interface, said layer 2 switching logic
> configured to provide at least one of said plurality of data packets to said first layer
> 2 protocol stack such that said at least one of said plurality of data packets is
> transmitted via a primary network and a first protocol to said second router, **said
> layer 2 switching logic configured to perform a layer 2 switch in response to**

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a detection of said error condition by said layer 3 protocol stack such that said layer 2 switching logic provides, in response to said detection, at least one other of said plurality of data packets to said second layer 2 protocol stack such that said at least one other of said plurality of data packets is transmitted via a secondary network and a second protocol to said second router, wherein said layer 2 switch is transparent to said layer 3 protocol stack. (Emphasis added).

For at least reasons similar to those set forth above in the arguments for allowance of claim 1, Applicants respectfully assert that the alleged combination of *Gale* and *Heeren* fails to suggest at least the features of claim 6 highlighted above. Thus, the 35 U.S.C. §103 rejection of claim 6 should be withdrawn.

Claims 7, 8, and 10

Claims 7, 8, and 10 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Gale* in view of *Heeren*. Applicants submit that the pending dependent claims 7, 8, and 10 contain all features of their respective independent claim 6. Since claim 6 should be allowed, as argued hereinabove, pending dependent claims 7, 8, and 10 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 11

Claim 11 presently stands rejected under 35 U.S.C. §103 as allegedly being unpatentable

over *Gale* in view of *Heeren*. Claim 11 reads as follows:

> 11. A method for use in a network router, comprising the steps of:
> providing data packets from a layer 3 portion of said network router, said layer 3 portion including a routing table specifying route information for said data packets;
> inserting said route information into each of said data packets;
> interfacing a first plurality of said data packets with a first communication interface of a layer 1 portion of said network router;
> communicating said first plurality of data packets from said first communication interface over a primary data path to a second router via a first protocol;
> ***detecting a layer 3 error condition associated with said primary data path***;
> ***automatically performing a layer 2 switch in response to said layer 3 error condition***;
> ***interfacing, in response to said layer 2 switch, a second plurality of said data packets with a second communication interface of said layer 1 portion; and***
> ***communicating said second plurality of data packets from said second communication interface over a backup data path to said second router via a second protocol,***
> ***wherein said layer 2 switch is transparent to said layer 3 portion***.
> (Emphasis added).

Applicants respectfully assert that the alleged combination of *Gale* and *Heeren* fails to suggest at

least the features of claim 11 highlighted hereinabove. Thus, the 35 U.S.C. §103 rejection of

claim 11 should be withdrawn.

In this regard, it is candidly admitted in the Office Action that *Gale* fails to teach a layer 2

switch that is transparent to a layer 3 portion of a network router. However, it is alleged in the

Office Action that the features missing from *Gale* are suggested by *Heeren*.

Heeren appears to disclose a frame relay access unit (FRAU) 12 that implements layers 1

and 2 of the Open Systems Interconnect (OSI) seven-layer model. The FRAU 12 apparently

initiates a switch to a backup path in response to an error condition. However, FRAU fails to

suggest that the switch is to be initiated in response to a layer 3 error condition. Thus, even if the

select teachings of *Heeren* are combined with the select teachings of *Gale*, as alleged in the Office Action, the alleged combination nevertheless fails to suggest at least "detecting a *layer 3 error condition* associated with said primary data path" and "automatically performing *a layer 2 switch in response to said layer 3 error condition*," as recited by claim 11. (Emphasis added).

For at least the above reasons, Applicants respectfully assert that the alleged combination of *Gale* and *Heeren* fails to suggest each feature of claim 11. Accordingly, the 35 U.S.C. §103 rejection of claim 11 should be withdrawn.

Claims 12-15

Claims 12, 14, and 15 presently stand rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Gale* in view of *Heeren*. In addition, claim 13 presently stands rejected in the Office Action under 35 U.S.C. §103 as allegedly being unpatentable over *Gale* in view of *Heeren* and further in view of *Singh*. Applicants submit that the pending dependent claims 12-15 contain all features of their respective independent claim 11. Since claim 11 should be allowed, as argued hereinabove, pending dependent claims 12-15 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 16

Claim 16 presently stands rejected under 35 U.S.C. §103 as allegedly being unpatentable

over *Gale* in view of *Heeren*. Claim 16 reads as follows:

> 16. A method for use in a network router, comprising the steps of:
> using a layer 3 protocol stack within said network router to provide a plurality of data packets, said layer 3 protocol stack including a routing table specifying route information for said plurality of data packets;
> inserting said route information into each of said plurality of data packets;
> transmitting said data packets from a first layer 1 communication interface over a primary data path to a second router via a first protocol and from a second layer 1 communication interface over a backup data path to said second router via a second protocol;
> transmitting each of said data packets to one of a plurality of layer 3 network interfaces within said network router;
> **detecting a layer 3 error condition associated with said primary data path**;
> transmitting said data packets from said one layer 3 network interface to a plurality of layer 2 protocol stacks within said network router; and
> **changing which of said layer 2 protocol stacks receives each of said data packets based on said detecting step without updating said layer 3 protocol stack based on said detecting step**,
> **wherein each of said data packets received by a first one of said layer 2 protocol stacks is transmitted over said primary data path and each of said data packets received by a second one of said layer 2 protocol stacks is transmitted over said backup data path**. (Emphasis added).

For at least reasons similar to those set forth above in the arguments for allowance of claim 11,

Applicants respectfully assert that the alleged combination of *Gale* and *Heeren* fails to suggest at

least the features of claim 16 highlighted above. Thus, the 35 U.S.C. §103 rejection of claim 16

should be withdrawn.

Claim 19

Claim 19 has been newly added via the amendments set forth herein. Claim 19 presently

reads as follows:

> 19. A network router, comprising:
> a layer 1 portion having a first communication interface and a second communication interface, wherein said first communication interface is configured to transmit to a second router via a first protocol over a primary data path through a first network, and wherein said second communication interface is configured to transmit to said second router via a second protocol over a backup data path through a second network;
> a layer 2 portion;
> a layer 3 portion having a layer 3 protocol stack, said layer 3 protocol stack having a routing table and configured to provide a plurality of data packets destined for a particular destination, said plurality of data packets including at least a first data packet and a second data packet, said layer 3 protocol stack configured to insert layer 3 route information into a respective header of each of said plurality of data packets based on said routing table, said layer 3 route information indicative of said primary data path, said layer 3 protocol stack configured to detect an error condition associated with said primary data path, wherein said first data packet is transmitted by said first communication interface via said first protocol over said primary data path to said second router; and
> switching logic configured to automatically initiate a layer 2 switch in response to a detection of said error condition by said layer 3 stack such that said layer 2 portion interfaces said second data packet with said second communication interface, wherein said second data packet is transmitted by said second communication interface via said second protocol over said backup data path to said second router, and wherein said layer 2 switch is transparent to said layer 3 portion.

Applicants respectfully assert that the cited art fails to disclose or suggest each of the above

features of pending claim 19. Thus, claim 19 is allowable.

CONCLUSION

Applicants respectfully request that all outstanding objections and rejections be withdrawn and that this application and all presently pending claims be allowed to issue. If the Examiner has any questions or comments regarding Applicants' response, the Examiner is encouraged to telephone Applicants' undersigned counsel.

Respectfully submitted,

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